

US EPA ARCHIVE DOCUMENT

**SERDP Project ER-1295
Products**

Journal Articles

Falta, R.W. (2003). « A dual domain approach for modeling subgridblock scale DNAPL pool dissolution.” *Water Resources Research*, 39(12): SBH 18-1-8.

Cho, J., M.D. Annable, and P.S.C. Rao. (2003). “Residual alcohol influence on NAPL saturation estimates based on partitioning tracers.” *Environmental Science & Technology*, 37: 1639-1644.

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Falta, R.W., N. Basu and P.S.C. Rao. (2005). “Assessing the impacts of partial mass depletion in DNAPL source zones: II. Coupling source strength functions to plume evolution.” *Journal of Contaminant Hydrology*, 79(1-2): 45-66.

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VanAntwerp, D., R.W. Falta, and J.S. Gierke. (2008). "Numerical Simulation of Field Scale Contaminant Mass Transfer During Air Sparging." *Vadose Zone Journal*, 7:294-304.

Basu, N.B., A.D. Fure, and J.W. Jawitz. (2008). "Simplified contaminant source depletion models as analogs of multiphase simulators." *Journal of Contaminant Hydrology*, 97(3-4): 87-99.

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Book Chapters

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Technical Reports/Software

US EPA. Kavanaugh, M. and P.S.C. Rao. (2003). "The DNAPL remediation challenge: is there a case for source depletion?" Publication No. EPA/600/R-03/143.

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<http://www.epa.gov/ada/csmos/models.html>

Proceedings Papers

Falta, R.W. (2003). "Modeling subgridblock scale DNAPL pool dissolution using a dual domain approach." In: Proceedings TOUGH symposium, Lawrence Berkeley National Laboratory, Berkeley, CA., May 12-14.

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Wagner, David E. (2006). "Modeling study to quantify the benefits of groundwater contaminant source remediation." MS Thesis, AFIT/GES/ENV/06M-07, School of Engineering and Management, Air Force Institute of Technology.

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Fure, A.D. (2005). "Relationships between mass and flux in DNAPL source zones." Ph.D. Dissertation, University of Florida.

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Totten, C., (2006). "Effect of porous media and fluid properties on dense Non-Aqueous Phase Liquid migration and dilution mass flux." PhD Dissertation, University of Florida.

VanAntwerp, D. (2006). "Using a Dual-Media Approach to Model Air Sparging Mass Transfer." MS Thesis, Clemson University

Yoon, H. 2006. "Validation of Methods to Measure Mass Flux of a Groundwater Contaminant." MS Thesis, AFIT/GES/ENV/06M-08, School of Engineering and Management, Air Force Institute of Technology.

Kim, S.J. (2005). "Validation Of An Innovative Groundwater Contaminant Flux Measurement Method." MS Thesis, AFIT/GES/ENV/05M-02, School of Engineering and Management, Air Force Institute of Technology.

Basu, N. (2006). "Flux Based Site Assessment And Design Of An Integrated Remediation System." PhD Dissertation, Purdue University.

Lee, J. (2006). "Development And Assessment Of Surfactant Modified Sorbents To Measure Inorganic And Organic Contaminant Fluxes Using Passive Flux Meter." Ph.D. Dissertation, Purdue University.

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US EPA. (2007). "Flux-Based Methods for DNAPL Remediation Design and Assessment." Washington, DC. September 20.

(2008). Flux-Based site Management Workshop. Triad Investigations: New Approaches and Innovative Strategies. National Conference and Training. Amherst, MA. June 10, 2008.

Presentations

Falta, R.W. (2006). "Impacts of DNAPL Source Zone Treatment: Experimental and Modeling Assessment of Benefits of Partial Source Removal." Presentation, SERDP/ESTCP DNAPL Source Zone Workshop, Baltimore, MD. March 7-9.

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Brooks, M.C. and A.L. Wood. (2005). "Measurement and Use of Contaminant Flux as an Assessment Tool for DNAPL Remedial Performance." Presentation, NIEHS Web Seminar August 10.

Wood, A.L. (2005). "DNAPL Source Remediation Research." Presentation, DOE Performance Monitoring Workshop, Butte, MT., June 21-23.

Goltz, M. (2003). "Impact of source treatment." Presentation, AFIT Remediation Project Manager Briefing, Wright-Patterson AFB., OH., April.

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Falta, R.W. (2005). "Assessing the Benefit of Radiological Source Remediation Efforts in Terms of Groundwater Plume Attenuation. Poster Presentation, 50th Annual Meeting of the Health Physics Society, American Conference of Radiological Safety, Spokane, WA., July 10-14.

Falta, R.W. (2005). "The Relationship Between Partial DNAPL Source Zone Remediation and Groundwater Plume Attenuation." Presentation, 6th Environmental Technology Symposium and Workshop, U.S. Army Environmental Center, Portland, OR., March 14-16.

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Annable, M.D. (2003). "Flux based site characterization and remedial performance assessment." Presentation, SERDP Annual Technical Symposium, Washington, DC., December 2-4

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Jawitz, J.W. (2003). "The relationship between mass reduction and flux reduction for NAPL source zones." Presentation, 225th American Chemical Society National Meeting, Division of Environmental Chemistry, New Orleans, LA, March 23-28.

Jawitz, J.W. (2003). "Benefits of partial removal of NAPL source zones and measurement of solute fluxes." Presentation, United States Department of Agriculture Western Regional Project W-82 Regional Project Meeting, Tucson, AZ, January 9-10.

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Goltz, M.N., J. Huang, D.E. Wagner, and J.L. Heiderscheidt. (2006). "Modeling the Benefits of Groundwater Contaminant Source Remediation." Presentation, 2006 Western Pacific Geophysics Meeting, Beijing, China, 24-27 July.

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US EPA. Falta, R.W. (2006). "REMChlor – Remediation Evaluation Model for Chlorinated Solvent Sites." Poster Presentation, the 18th Annual National Tanks Conference, Memphis, TN, March 20-22.

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Wood, A.L. and M.C. Brooks. (2007). "Flux-Based Site Management." Presentation, U.S. EPA Ground Water Forum, Las Vegas, NV. November 8.

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Jawitz, J.W., X. Chen, and N.B. Basu. (2007). "Reactive tracer techniques for predicting DNAPL mass depletion and flux reduction." Presentation, Groundwater Quality 2007: 5th International Conference, Fremantle, Australia, 2 - 7 December.

Jawitz, J.W., N. Basu, and X. Chen. (2007). "Prediction of down-gradient impacts of DNAPL source depletion using tracer techniques: Laboratory and modeling validation." Invited Presentation, Eos Trans. AGU, 88(23), Jt. Assem. Suppl., Abstract H22C-03, Acapulco, Mexico, 22-25 May.

Chen, X., H. Wang, and J.W. Jawitz. (2006). "Comparison of tracers and image analysis for characterizing DNAPL spatial distribution and the effects of mass removal on contaminant flux reduction." Presentation, Fall Meeting of the American Geophysical Union, San Francisco, CA, December 11-15. EOS Transactions AGU, 87(52), Fall Supplement, Abstract H11C-1264.

Wang, H., X. Chen, and J.W. Jawitz. (2006). "Visualization methods to quantify DNAPL dynamics in chemical remediation." Presentation, Fall Meeting of the American Geophysical Union, San Francisco, CA, December 11-15. EOS Transactions AGU, 87(52), Fall Supplement, Abstract H11C-1267.

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Jawitz, J.W., N. Basu, X. Chen, and A. Fure. (2006). "Tracer techniques for characterization of aquifer and contaminant heterogeneity, and remedial performance prediction in a Lagrangian framework." Invited Presentation, Geological Society of America Annual Meeting and Exposition, Philadelphia, PA, October 22-25.

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Goltz, M.N. (2007). "Groundwater Contaminant Mass Flux Measurement Methods." Presentation, Stanford Hydrogeology Seminar Series, Stanford, CA, 7 November.

Goltz, M.N. (2007). "Modeling and Measuring the Benefits of a Groundwater Contaminant Source Remediation." Presentation, Yonsei University, Seoul, Korea, 21 June.

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